



# Monkeypox: is it the time for autopsy?

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Received: 13 October 2022 / Accepted: 20 October 2022 / Published online: 25 October 2022  
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Dear Editor,

According to the Centers for Disease Control and Prevention (CDC), 26 cases died due to monkeypox in the current outbreak; importantly, 14 of them were from Africa. They are dispersed among 12 different nations. They are Nigeria, Ghana, Cameroon, Sudan, India, Brazil, Mexico and Cuba, Ecuador, USA, Spain, Belgium, and Czech [1].

The strain that causes the current outbreak is less deadly than the previous strain that caused the outbreak years ago or that we thought till now. In the current outbreak, the fatality rate was 0.04% (less than 1%) compared to 10–11% for the previous outbreak according to the World Health Organization, and a recent article by Lauren Vogel [2]. However, is it the cause of the low fatality rate, or is due to the change in the virus epidemiology? While the prior outbreaks primarily affected children and pregnant women, the present one mainly impacts men who have sex with men [3].

According to US health officials, three patients died since the beginning of the outbreak, in Texas, Los Angeles, and Ohio, respectively [4]. The three deaths occurred in patients with severely compromised immune systems. In fact, the CDC announced that about 38% of diagnosed monkeypox cases were detected in HIV patients [1].

Months ago, The Nigeria Centre for Disease Control and Prevention reported that the country was endemic to the virus since the discovery of a large number of monkeypox cases there. Furthermore, it announced the death of a 40-year-old patient who was on immunosuppressive medications for a while [5].

The first death outside Africa was reported in Brazil at the end of July 2022 in a 41-year-old patient who had Hodgkin lymphoma and a debilitated immune system [6]. He died from septic shock shortly after hospitalization.

Shortly after Brazil announced the first victim outside Africa, Spain reported the death of two Spain patients; both of them suffered from encephalitis; extra details were not provided by the Spanish Health Ministry [7].

The first death in Ghana was reported in late July in a patient who presented with fever and skin rash; the patient was hospitalized; the sample was taken and confirmed the infection 4 days after the patient died, according to the Ghana Health Service [8]. Extra detail was not accessible.

The fourth reported death outside Africa was confirmed in a 22-year-old Indian patient, who died 3 days after hospitalization with fever and swollen lymph nodes before his condition deteriorated and died later [9]. Further details were not available.

In light of the above, we can elicit that monkeypox-related deaths were most commonly seen in immune-compromised patients, and with the available resources, it is unclear whether the death was related to the infection or due to other related health issues. Therefore, the primary cause of monkeypox-related death was not yet clear.

During the COVID-19 pandemic, the autopsy was useful for providing important information about the exact causes of death, the affected organs as well as the medico-legal purposes [10]. The autopsy is always a tool of interest. It is usually done for suspected cases or unexpected deaths and in case of a disease outbreak or a disease of public health interest. Undoubtedly, monkeypox satisfies these criteria, but do we need it?

The autopsy can provide extra details about the current outbreak and the role that the virus plays in the human body. However, someone might ask why to do such an unpleasant procedure for a disease with a fatality rate of 0.04%. Why healthcare facilities can open themselves up to liability issues. Furthermore, monkeypox has a predominantly skin manifestation with few extra dermatological complications, and generally, the autopsy is fulfilled for those with multi-system involvements. Therefore, weighting the risks and benefits role has to be implemented. The argument about autopsy will continue until irresistible, incontestable, and convincing data were released about the exact cause of the

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death. Yet, the autopsy is a tool of high-quality assurance utility.

**Acknowledgements** Nil.

## Declarations

**Ethics approval** Not applicable.

**Informed consent** Not applicable.

**Conflict of interest** The author declares no competing interest.

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